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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of	)	
	)	
Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992	)	ET Docket No. 93-7
	)	
	)	
Compatibility Between Cable Systems and Consumer Electronics Equipment	)	

REPLY COMMENTS OF MULTICHANNEL COMMUNICATION SCIENCES, INC.

August 10, 1993

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1 Introduction

Multichannel Communication Sciences, Inc. ("MCSI"), hereby replies to the Supplemental Comments submitted by the Cable-Consumer Electronics Compatibility Advisory Group ("Advisory Group")[1]. MCSI is the developer of the Addressable Digital Broadband Descrambling Access Control technology, that upon implementation allows cable operators to deliver to subscriber terminals all authorized signals simultaneously in the clear, while keeping these signals protected by scrambling on the cable plant.

The Advisory Group offers recommendations for measures that should be taken in the short term and long term in order to improve the compatibility between cable and consumer electronics equipment. With a few exceptions and qualifications, MCSI supports in general the long term recommendations of the Advisory Group. Specifically, MCSI concurs with the Advisory Group's recommendations to institute standards for digital transmission, compression and security interfaces. These long term measures will affect design and operation of future

[1] Supplemental Comments Cable-Consumer Electronics Compatibility Advisory Group, July 21, 1993 *In the Matter of Implementation of Section 17 of the Cable Television Consumer Protection and Competition Act of 1992, Compatibility Between Cable Systems and Consumer Electronics Equipment.* ET Docket No. 93-7. (Hereinafter referred to as "Advisory Group Supplemental Comments").

consumer electronics equipment and therefore would not solve the compatibility problems for the growing installed base of consumer electronics equipment. It would take many years for the industry to develop, test, adopt and for the Commission to prescribe rules; and for manufacturers to start production of decoder interface based consumer electronics equipment; and for consumers to begin to replace their consumer electronics equipment through normal consumer cycles of product replacement, wherein the useful life of such modern equipment increases with manufacturing innovations. Thus, MCSI submits that the compatibility measures for the growing installed base of consumer electronics equipment are not short term measures, but rather the only measures that could be used by the majority of cable subscribers well after the turn of this century. MCSI believes that the Advisory Group's proposed measures for the installed based are inadequate, and much more can be done, and should be done. We also believes that effective short term measures can be taken not only for the installed base but also for future new consumer electronics products. Similarly, we believe that other measures should be applied over longer time frames in order to provide relief to users of the growing installed base of consumer electronics equipment.

2 The Commission Must Adopt Rules for RF Interfaces of Television Receiving Devices Without Delay

The Advisory Group includes the adoption of measures for "Front-end" receiver design characteristics that deal with spurious signal levels, distortion performances and "direct pick-up" immunities as Measure (a) in the "longer term measures" category[2]. The Advisory Group defines "cable ready" products as receiving devices that meet certain "Front-end" receiver specifications with specified channel tuning range capabilities and the "Decoder Interface". The Advisory Group recommends that the "Front-end" RF specifications and rules are to be promulgated only upon the introduction of what it defines as "cable ready" television receiving devices, which by implication, means that the "Front-end" RF specification rules will only be applicable at the time the "Decoder Interface" matter will be resolved and prescribed by Commission rules. MCSI submits that this delay in the introduction of RF interface rules is not necessary, and should be avoided. The Advisory Group further recommends that no RF Interface regulations should apply to a whole class of television receiving devices that are not

[2] Advisory Group's Supplemental Comments at 9.

marketed as "cable ready"[3]. MCSI submits that the Commission must reject this attempt to evade and delay the early introduction of RF interface specifications that are a prerequisite for degradation-free operation of subscriber television receiving devices that are connected directly to cable systems without passing through a converter. To do so, would frustrate even the very measure the Advisory Group itself recommends as the First short term measure of providing an RF bypass circuit so that all unscrambled signals are delivered directly to the TV or VCR[4]. This bypass measure is also an explicit statutory requirement of the Cable Television Consumer Protection and Competition Act of 1992[5] ("Cable Act"), [See §624A(c)(2)(B)(ii)]. When a bypass is effected, all signals appear at the input stage of the television receiving device (requiring certain distortion performance) and it may also be subject to direct pick-up. Furthermore, subscribers who do not need a converter/descrambler because they do not subscribe to scrambled channels or because they may be receiving all authorized channels in the clear thanks to broadband access control technologies such as traps, Addressable Interdiction or Addressable Broadband Descrambling, will require the direct connection of their television receiving devices to their cable drop. Hence, we urge the Commission to decouple the process of establishing such RF Interface rules from the proceedings that attempt to resolve the Decoder Interface issues. We believe evidence and data to help establish such rules can be gathered and agreed upon much earlier. Furthermore, if nothing else, the Commission should look to such RF specifications that are widely available and used by the cable industry to specify converter products it acquires. The Commission should presume that these specifications are not unduly over-specified by cable systems operators, as they would be the direct beneficiaries of any cost reductions that might be obtained from the relaxation of such specifications.

3 The Advisory Group's Recommended Measures for the Growing Installed Consumer Electronics Equipment Base Are Insufficient

First Measure (page 8.)

The Advisory Group says that "cable operators can sell or rent RF bypass circuitry that delivers all unscrambled signals to the TV or VCR.." The Advisory Group admits that this

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[3] Advisory Group's Supplemental Comments at 10.

[4] Advisory Group's Supplemental Comments at 8.

[5] Pub. L. No. 102-385, 102 Stat. 1460 (1992).

measure (for which the consumer must pay incrementally) is useless in facilitating advanced television picture generation and display and for allowing subscribers to watch one channel while recording another "in cases involving two scrambled channels, which is infrequently necessary" (emphasis supplied). The Advisory Group offers no evidence as to the necessary frequency with which consumers require such use of scrambled channels. It ignores the frequency with which these subscriber predicaments occur when the cable system scrambles not only all the pay channels but also all other tiers.

Such bypass measures would presumably be implemented with stand-alone RF switches because very few cable converters installed or sold today employ an RF bypass option. Furthermore, even if they did, it is difficult to contemplate an effective bypass measure that only applies for the TV set and not for the VCR. Hence, a more complicated multiple input - multiple output crossbar RF switch is required, not unlike the set-top Video Switcher described in an earlier filing in this Docket[6]. A further complication ignored by the Advisory Group is the fact that some subscribers may require an additional means of RF switching to receive off-air broadcast channels.[7] Such switching requirements may involve VHF and UHF antenna inputs for both the TV set and the VCR. Clearly, in these situations, the bypass schemes become a wiring and switching nightmares - requiring interconnect wires, a battery of switches, or an additional set-top RF crossbar switch that is collectively difficult to operate.

Second and Third Measures (page 8.)

Next, as a second measure the Advisory Group proposes the supply of built-in timers in cable set-top devices or in Universal remote controls which are compatible with cable set-top devices. Again, this half measure only partly addresses the need to sequentially tape two programs at different times. It does not solve all other compatibility problems. As a third measure, the Advisory Group offers a second converter/descrambler - or a single unit with two

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[6] See Attachment A to the Reply Comments of Greater Media, Inc., Monmouth Cablevision Associates and Riverview Cablevision Associates.

[7] There is growing evidence that many cable operators intend to discontinue the carriage of broadcast channels that assert their "Retransmission Consent" rights. Thus, they have prepared large stocks of A/B switches for subscribers who may wish to continue to receive such channels. See "Ops Spell Retransmission 'A/B', PR" *Multichannel News*, July 12, 1993, p3: ([TCI] ordered nearly half a million units..", "This isn't a bluff; we're serious, and we're spending real money," said a director of technology for Jones Intercable, which has begun receiving its own large A/B switch order.)

converter descramblers for subscribers with subscriptions to two or more scrambled channels who wish to watch one scrambled channel while recording another. Cable companies always had the option of renting to subscribers a second descrambler dedicated to VCR's. By seriously proposing the supply of yet another converter descrambler as a solution (the very presence and costs of which consumers have been trying to avoid), the Advisory Group ignores some of the key elements of subscriber frustration. The Advisory group does not explain how a subscriber using the remote control to change channels on one converter prevents the second converter from responding. How can any remote control functional distinction be made between the two converters? The Advisory Group nor any of the cable equipment vendors who may be offering dual converter descramblers do not explain how these dual descrambler devices are actually going to be used in conjunction with subscriber's consumer electronics equipment. For example, the Advisory Group fails to mention that in dual tuner TV PIP sets, most Picture In Picture ("PIP") display features such as multiple channel scan tuning modes and PIP channel ID display, are rendered inoperable even when dual descrambler devices are used because channel tuning and identification must still be done in the descramblers. For the same reason, problems also arise with single tuner PIP TV sets: The descrambler generated On-Screen-Display channel ID is decimated in the low resolution PIP display and thus becomes unreadable, or if presented in the full picture mode it may be obstructed by the second video source PIP display, causing subscribers inconveniences in channel selection and identification. Because all tuning must be performed in the dual tuner descrambler, it must also incorporate all programming features required for timer controlled recording[8]. These programming functions are required in addition to those used in the VCR. Thus, in order to use timer controlled recording, the subscriber must always use two different programming routines without confusing among them. Due to the special proprietary programming functions of descramblers with built in timers, it can only be done by the use of a proprietary remote control supplied by the cable company[9] and is not generally available in Universal Remote control units. In any event, the timing, programming and receiving functions are all duplicated at additional cost to subscribers.

A most troubling common theme of these second and third measures beyond their failure

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[8] See Comments of General Instrument at 4.

[9] See Comments of the City of Mesa, Arizona at 2.

to address the compatibility problems, is the fact that they are non responsive to the statutes and to Congress' intent. These measures (unsuccessfully) attempt to provide the subscriber a theoretical operational ability to perform simultaneous viewing and recording, sequential recording from different channels or the advanced picture generation and display capability by having to purchase, rent or otherwise acquire additional costly equipment. The statute orders the restoration of the features and functions that subscribers already purchased in their consumer electronics equipment: In the Finding portion of Section 17 of the Cable Act, Congress recognizes that

> ".. television receivers and video cassette recorders often contain premium features and functions that are disabled or inhibited because of cable scrambling, encoding, or encryption technologies and devices, including converter boxes and remote control devices required by cable operators to receive programming;"[10]

Congress then issues the general directive stating that

> " cable operators should use technologies that will prevent signal thefts while permitting consumers to benefit from such features and functions in such receivers and recorders".[11]

In addressing the regulations required for compatible interface the Cable Act requires that the Commission

> "..shall report to Congress on means of assuring compatibility between televisions and video cassette recorders and cable systems, consistent with the need to prevent theft of cable service, so that cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions and video cassette recorders."[12]

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[10] §624A(a)(1). Emphasis supplied.

[11] §624A(a)(3). Emphasis supplied.

[12] §624A(b)(1). Emphasis supplied.

Congress directs the Commission to consider various factors including

> " the costs and benefits to consumers of imposing compatibility requirements on cable operators and television manufacturers in a manner that, while providing effective protection against theft or unauthorized reception of cable service, will minimize interference with or nullification of the special functions of subscribers' television receivers or video cassette recorders..."[13].

Clearly, Congress directs that compatibility must be achieved by measures that allow the use of the features and functions already in the TV set and the VCR. These intended measures must not be confused with halfway measures which do not restore the use of such features within subscriber equipment but rather require additional redundant hardware at additional costs to consumers.

The legislative history clearly indicates that the economic fact that subscribers loose features that they have already paid for is by no means less important than the fact that they loose the convenience of such features and functions. In explaining the purpose of his amendment to S-12, Senator Patrick Leahy said:

> "My amendment is designed to create more user-friendly connections between cable systems on the one hand and televisions and VCR's on the other so that consumers will actually get to use the TV and VCR features they paid for."[14]

Hence, the connections must be simplified and measures must be taken to ensure that subscribers will be able to use the features already built-in their equipment. Yet, the Advisory Group's measures discussed above would accomplish exactly the opposite. They will saddle the consumer with complicated switching, interconnections, additional hardware and remote controls without actually allowing subscribers to use the features in their TV and VCR's which they already paid

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[13] §624A(c)(1)(A). Emphasis supplied.

[14] Senator Leahy's remarks, *Congressional Record - Senate*, at S 583, January 29, 1992. (Emphasis supplied).

for while at the same time require the subscriber to incur additional costs for such additional equipment.

The second and third measures the Advisory Group is proposing should also be rejected on the grounds that they contravene with the statutory requirement to promote the commercial availability of subscriber equipment from retail vendors that are not affiliated with cable systems. Unfortunately, in the near term, any dual converter/descrambler or descrambler with timer controlled operation can be made available only through cable operator's services. These devices have advanced programming features and functionalities that replace those functions in TV's and VCR's. The Commission must not favor solutions that allow costumer-premises functionalities to be syphoned out from consumer electronics equipment that is now supplied in a robust competitive market environment.

4 The Commission Must Provide Other Substantive and Effective Measures for the Growing Installed Base of Consumer Electronics Equipment .

Beyond the partial short term solutions the Advisory Group is advocating, the Commission's actions should include elements of regulatory incentives such as those recommended by MCSI[15] and supported by others, that promote supply of channels and tiers transmitted to subscribers in the clear, while not precluding the scrambling of channels on the cable system. Thus, the Commission should provide affirmative incentives to cable operators that over time result in the reduction of their reliance on set top devices and rather adopt broadband access control technologies such as addressable traps, Interdiction, Broadband Descrambling or any other technology that would accomplish the same results.

[15] See Definition of SCATS and Benchmark Increment Incentives in MCSI's Comments and Reply Comments.

5 Conclusion

For the foregoing reasons, MCSI respectfully recommends that the Commission adopt rules including measures beyond those recommended by the Advisory Group for the regulation of cable services and equipment consistent with the Reply Comments herein in order to assure compatibility between cable systems and consumer electronics equipment.

Respectfully submitted,

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